



Genetic diversity analysis in introgressed lines of American cotton

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Abstract : A study was undertaken to estimate the degree of divergence among the 50 introgressed lines of American cotton using multivariate Mahalanobis D^2 statistics at Cotton Research Unit, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola. These genotypes were grouped into seven clusters. Cluster I had highest number of genotypes (19) followed by cluster III (14), cluster IV (8) and cluster II (6), whereas, cluster V, VI and VII represented by single genotypes. The maximum genetic distance was observed between cluster V and cluster VII ($D=9.66$). Plant height recorded the maximum contribution (22.29%) towards genetic divergence. Cluster VII showed highest cluster mean values for the characters seed cotton yield per plant (78.67g), boll weight (3.7 g) and number of bolls per plant (21.30). Hence, these characters should be considered during formulation of hybridization programme.

Key Words : Genetic diversity, Mahalanobis D^2 statistics, *Gossypium hirsutum* L.

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